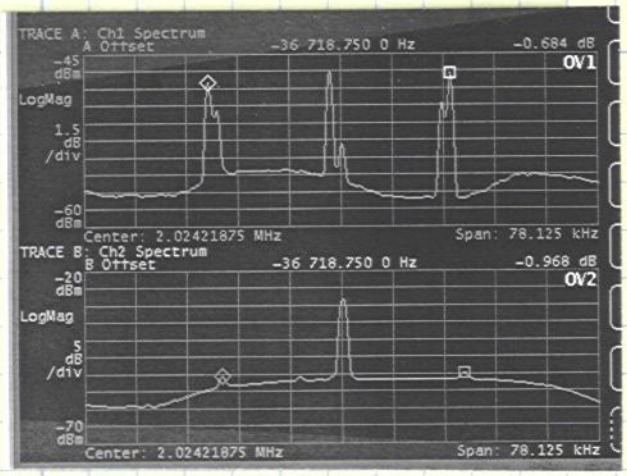
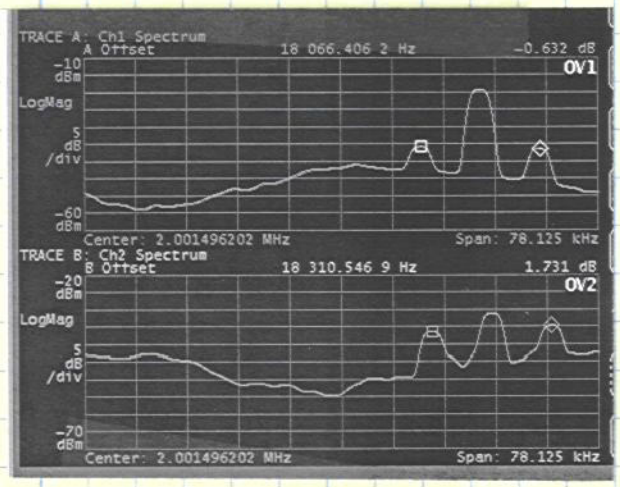
Schottky Spectra 23:00



yellow $q_x = q_y = .235$

taken at injection, showing coherence at revolution and betatron lines



blue $q_x = q_y = .117$

taken at injection, showing coherence - - -

Schottky says the machine is pretty messed up.

lineshape problem #1

1. In both rings, the coherent peaks do not line up with the humps one normally associates with the incoherent Schottky signal.
2. This misalignment resembles the effect of large Q', but is much more severe
3. Magnitude and phase (?) ~~of~~ of this effect is similar in both rings (suggesting caused by common elements)

lineshape prob #2

4. Linewidths are much different for blue and yellow. Is momentum distribution of yellow being shaved ~~by~~ at injection by large Q'?

lineshape prob #3

5. Yellow betatron lines have shoulders

0020 Talked these spectra over w/ RF guys. We conclude a lot of beam is outside the separatrix yet circulating, 200 Hz away at 28 MHz or ~ 14 KHz away at 2 GHz, contributing to this odd lineshape